

ZNE Case Study

San José Environmental Innovation Center

November 16, 2016



San José Environmental Innovation Center



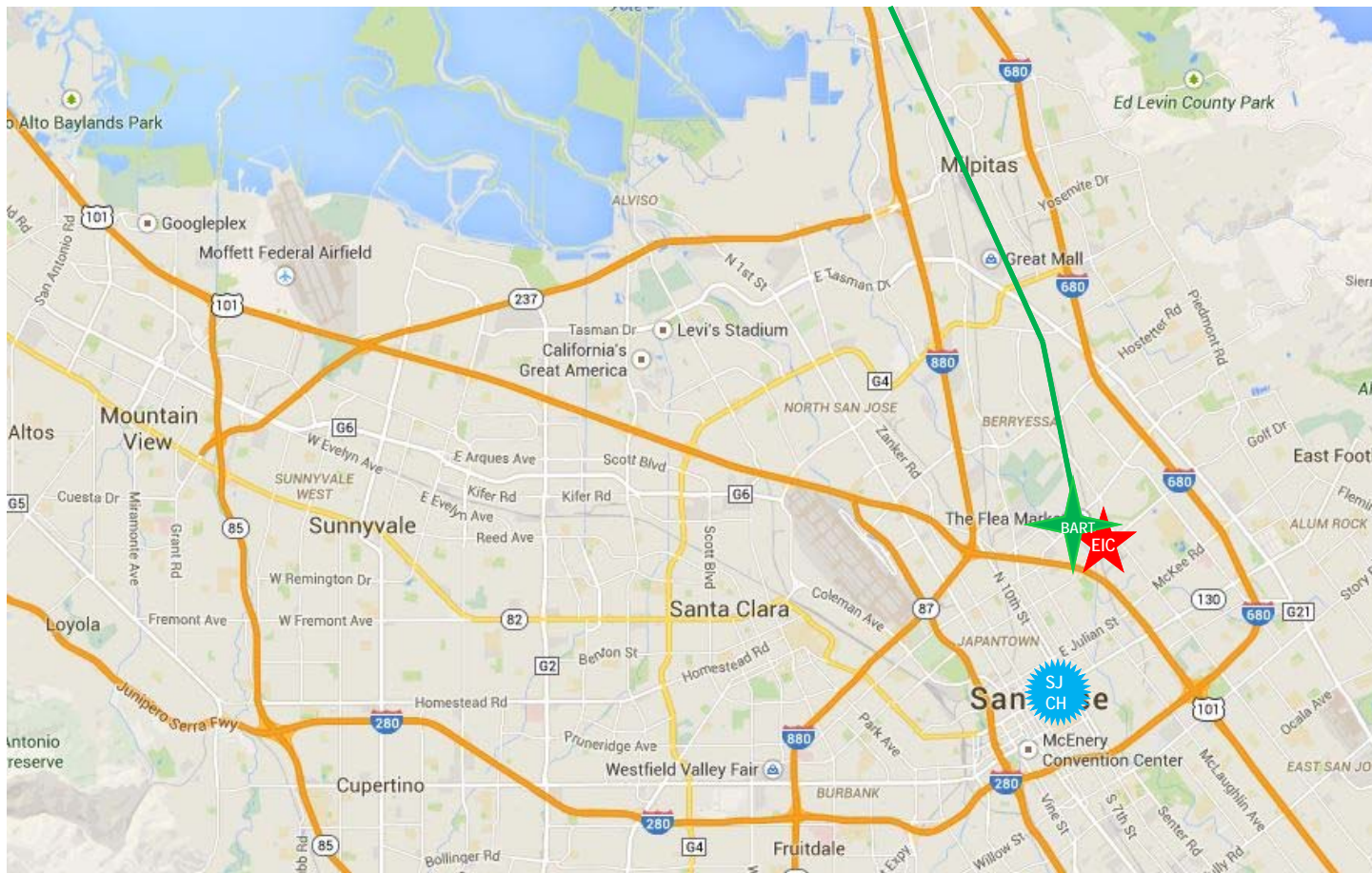
- Architect: J. Francis Ward
- Built in 1958 as a wax paper factory
- Rare example of Mid-Century Modern Architecture in the Bay Area
- Site: 4.27 acres
- Original Warehouse: 40,500 square feet
- New HHW building: 6,600 square feet

History & Timeline

- 1958: Warehouse built
- 1973: Purchased by City
- 2006: Acquired by Environmental Services
- 2009-2010: Phase I - Paving, landscaping & street improvements
- 2011-2014: Phase II – Warehouse renovation, new HHW building
- 2016: Phase III - Solar installation

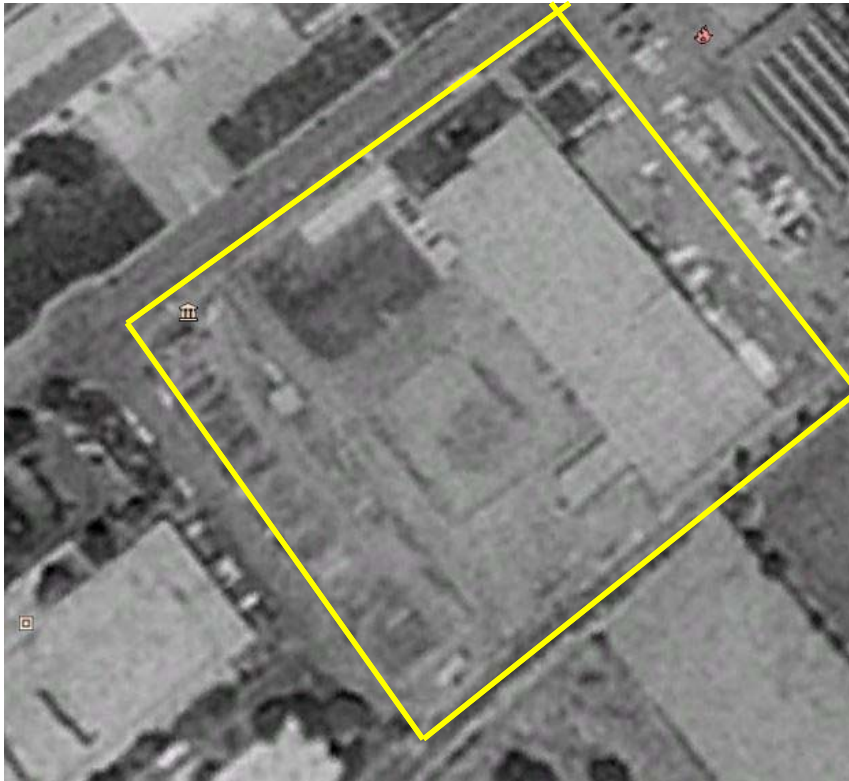


Environmental Innovation Center - Location



Delivering world class utility services and programs to improve our health, environment and economy

1608 Las Plumas: Before and After



Master Plan: EcoPark



Mission: Transform a blighted City property into a campus that supports environmental stewardship and economic development.



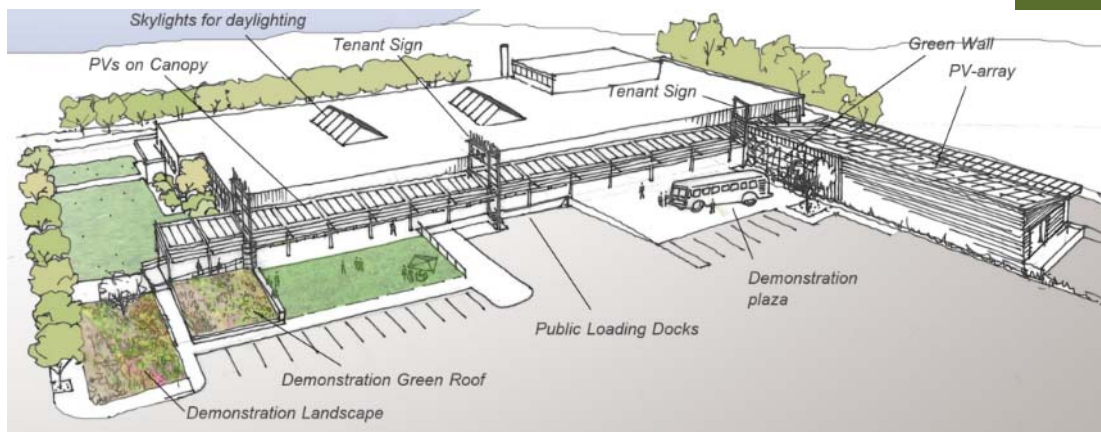
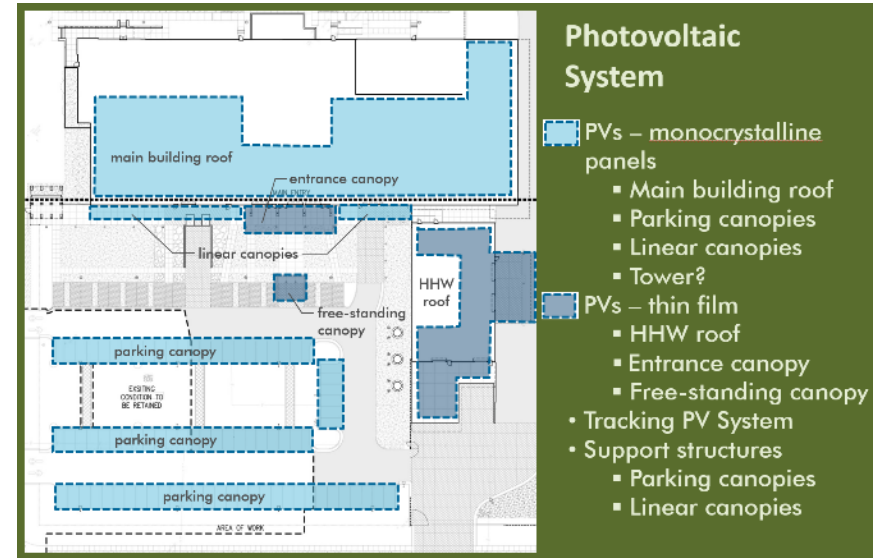
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Program + Design Vision

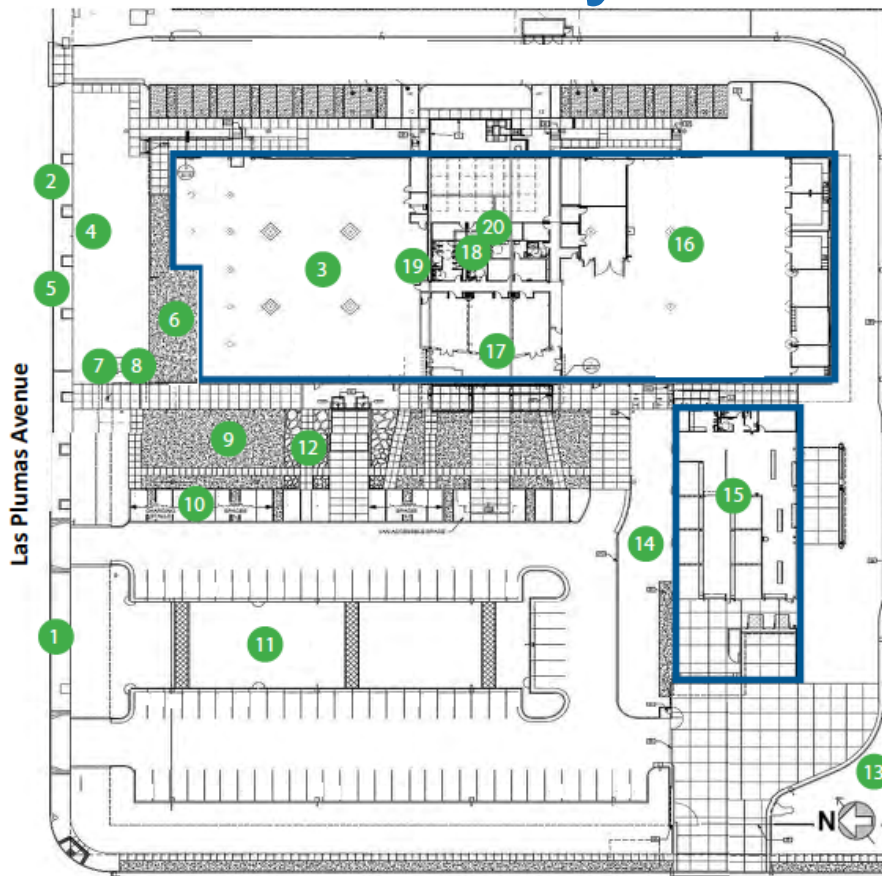


Design Goals + Targets

- LEED Platinum target
- Environmentally responsible systems
- Demonstration opportunities



Sustainability features

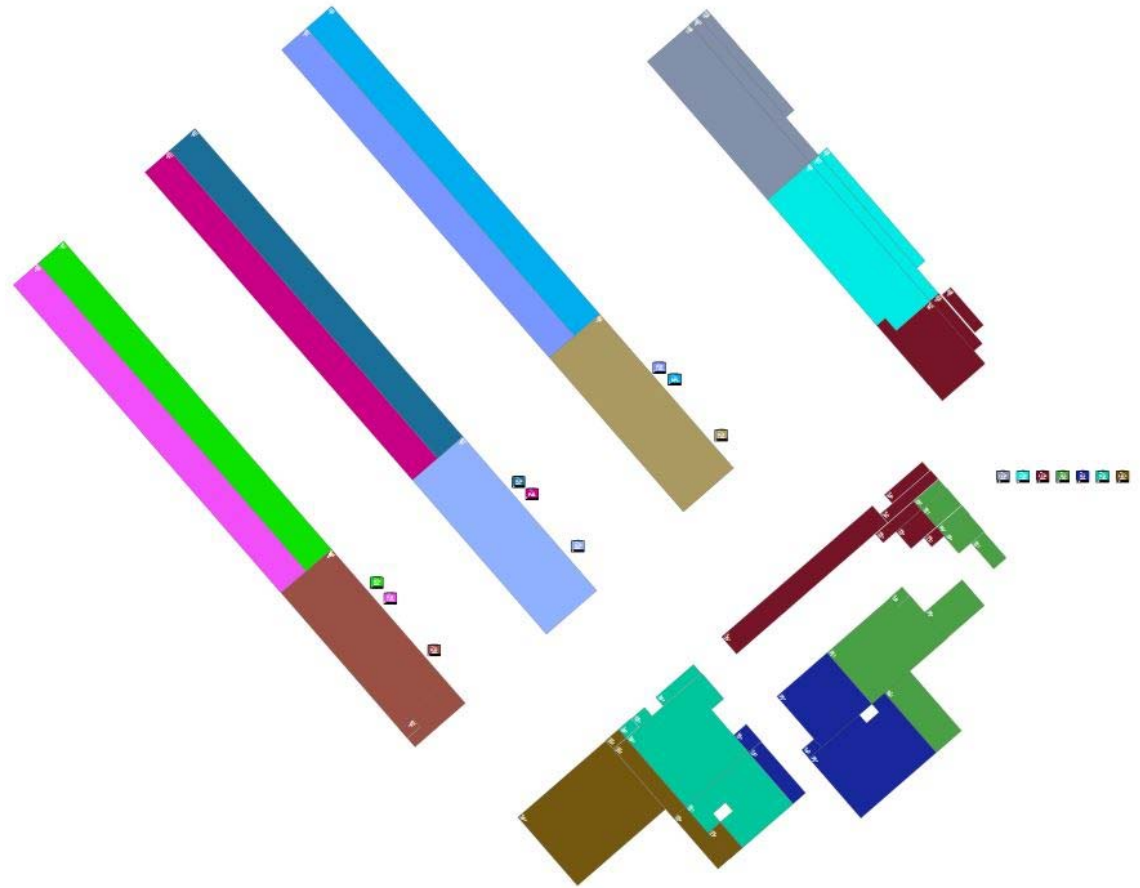


1. LED Lights
2. Silva Cells™ (tree root system)
3. Solar Tracking Skylights
4. Recycled Water Piping
5. Pervious Pavement (including recycled materials)
6. Smart Irrigation System (weather-based)
7. Wind Turbines
8. Solar Panels
9. Drought Tolerant Plants
10. Electric Vehicle Charging Stations
11. Modular Wetland®
12. Recycled Concrete
13. Bioswales
14. Public Art Feature
15. Cool Roof
16. Solar Light Tubes
17. Low VOC Materials (paints, adhesives, flooring)
18. Low/No-water Fixtures
19. Reclaimed Wood
20. Interior Composting Toilets



Green Features

- 343.8 kW system
- 599,000 kWh (projected annual generation)
- 1,164 total PV panels on roofs and car ports
- 21 inverters (16 currently used + 5 for future expansion)
- System offsets 100% of EIC's annual energy use



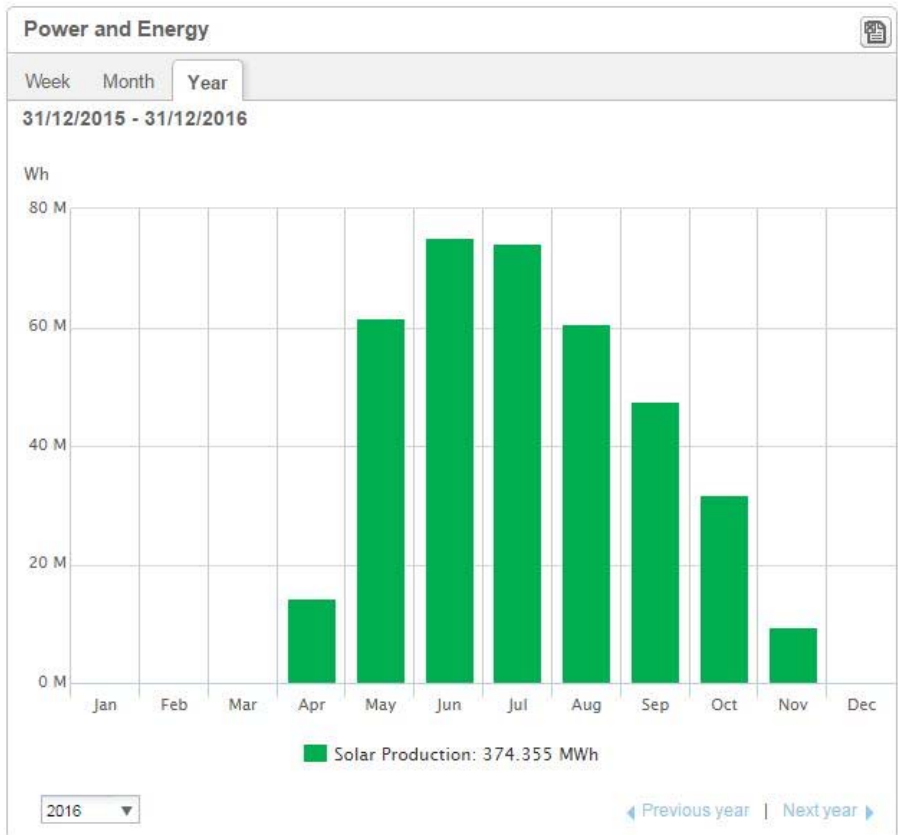
Solar Edge

Environmental Benefits

- 
CO2 Emission Saved
308,795.06 kg
- 
Equivalent Trees Planted
17,130.88
- 
Light Bulbs Powered
1,331,070.63 For a day

Overview

Current Power	Energy today	Energy this month	Lifetime energy
67.29 kW	1.12 MWh	9.36 MWh	439.25 MWh



Green Features

Solar PVs and wind turbines on landmark tower



Solar tracking skylights and solar light tubes

Green Features

- Award winning public art feature captures and reuses rainwater
- Interior composting toilets
- Silva cells (tree root system)
- Drought tolerant landscaping and smart irrigation system
- Vegetated swales and bio-retention area for stormwater
- Pervious pavement types





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Lessons Learned

- Get partners on board early
- Value engineering – stay true to intentions despite reduced budget
- Be flexible
 - Installed PV system evolved from plans
 - Funding options (NMTC, EDA grant)

Questions?

Anna Szabo

City of San Jose

Environmental Services Department

anna.szabo@sanjoseca.gov

sjenvironment.org/eic

Jill Eyres, Architect

LEED AP BD+C Senior Associate

Group 4 Architecture, Research +
Planning, Inc.

JEyres@g4arch.com



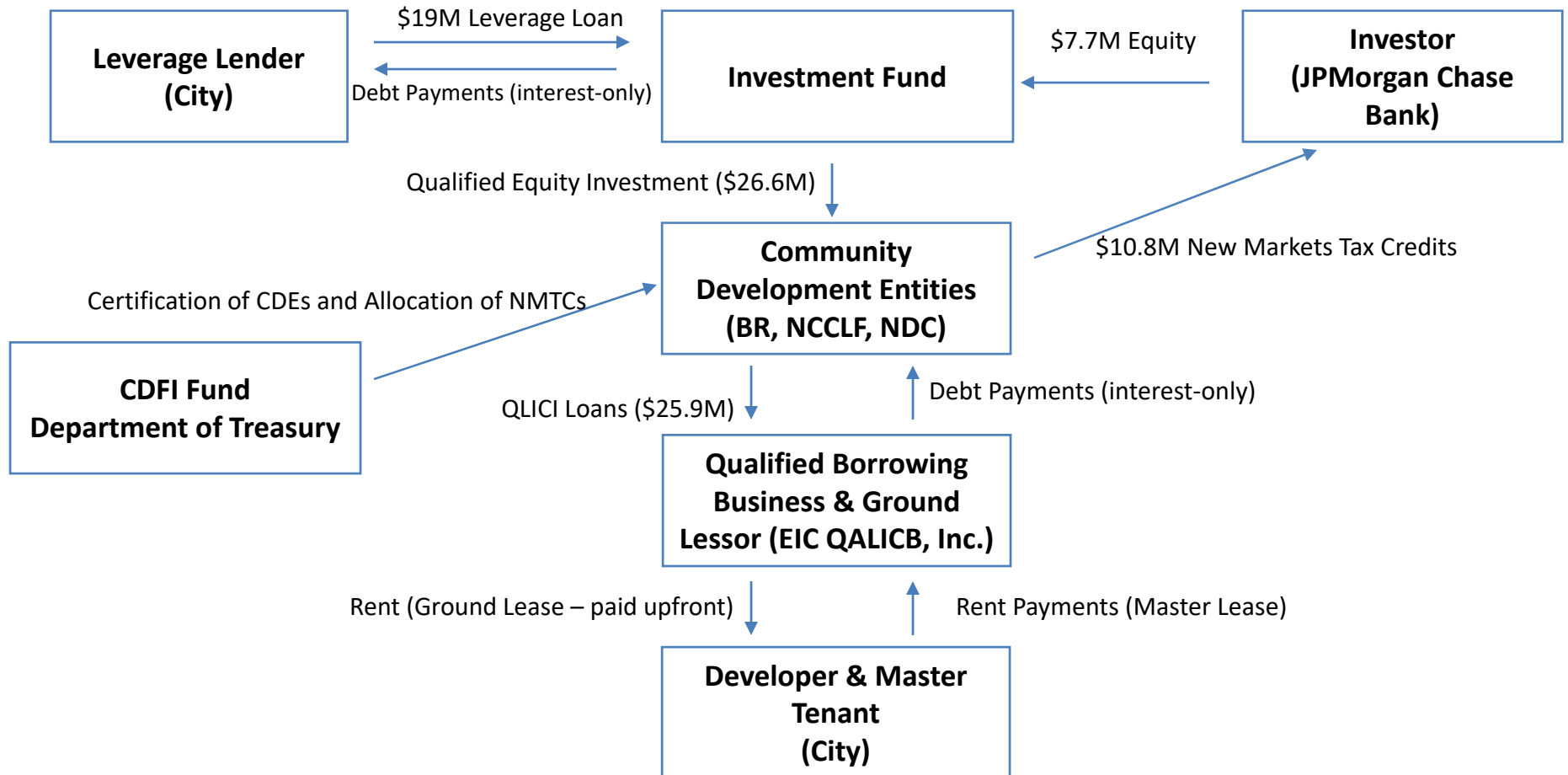
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Bonus slides

New Markets Tax Credits

- Promotes economic development in low-income communities
- U.S. Treasury Department awards tax credit allocations to Community Development Entities (CDEs)
- Tax credit allocations sold to investors in exchange for equity in qualifying projects (7-year compliance period)
- Specialized consultant support to assist City with NMTC transaction
- Transaction structure designed to minimize City risk and maximize benefit

New Markets Tax Credit Funding Structure



Flow of Funds - 7 Year Compliance Period

